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Figure 1

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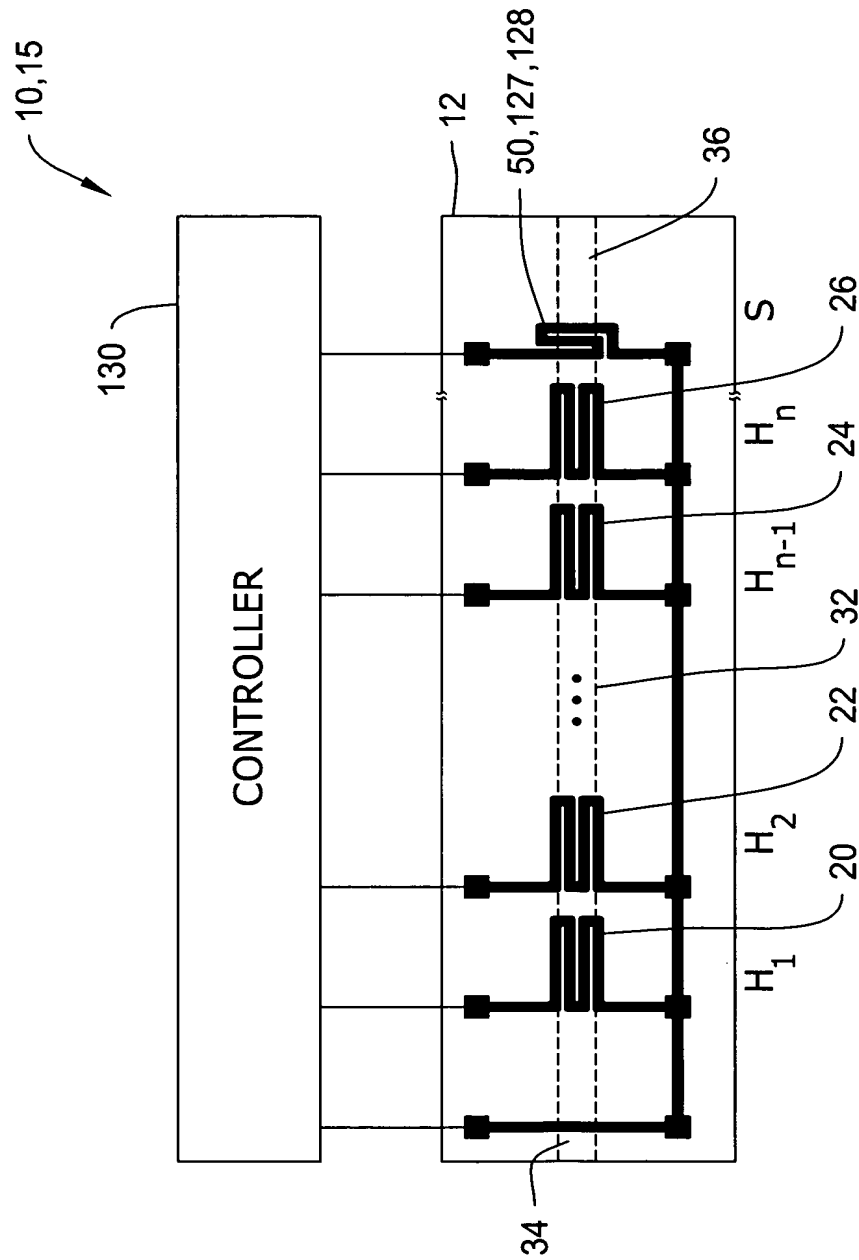


Figure 3

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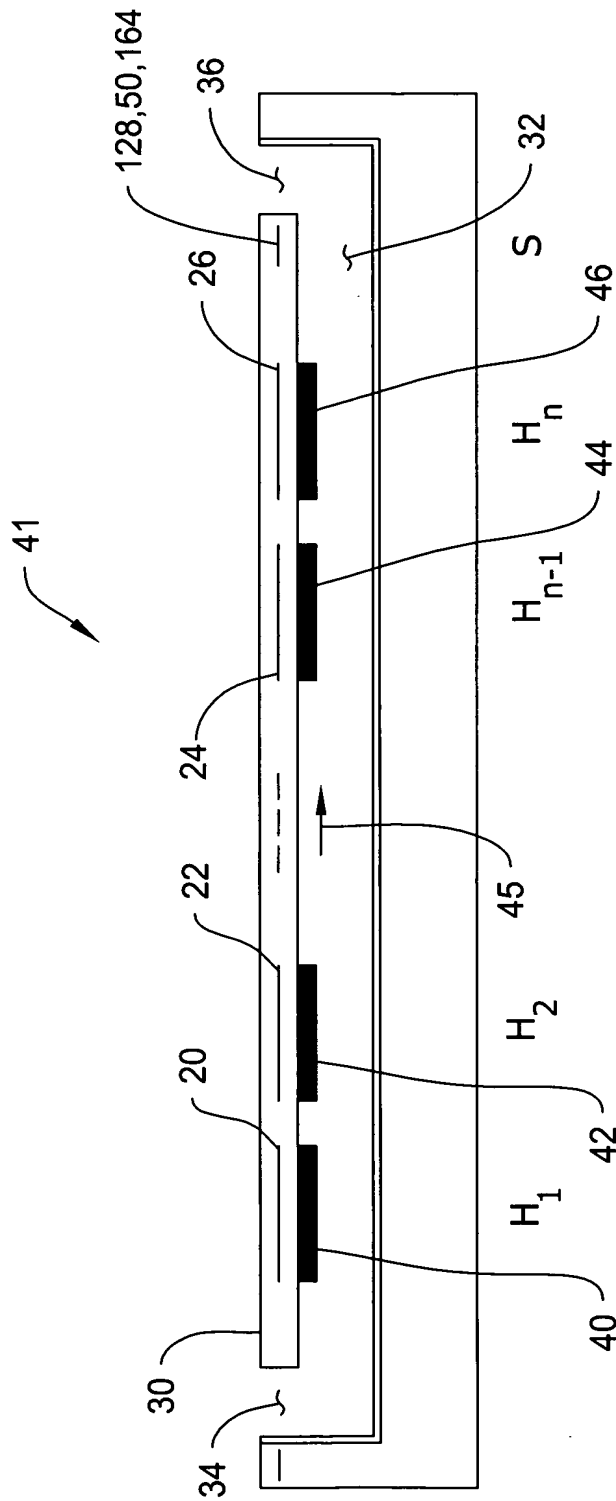


Figure 4

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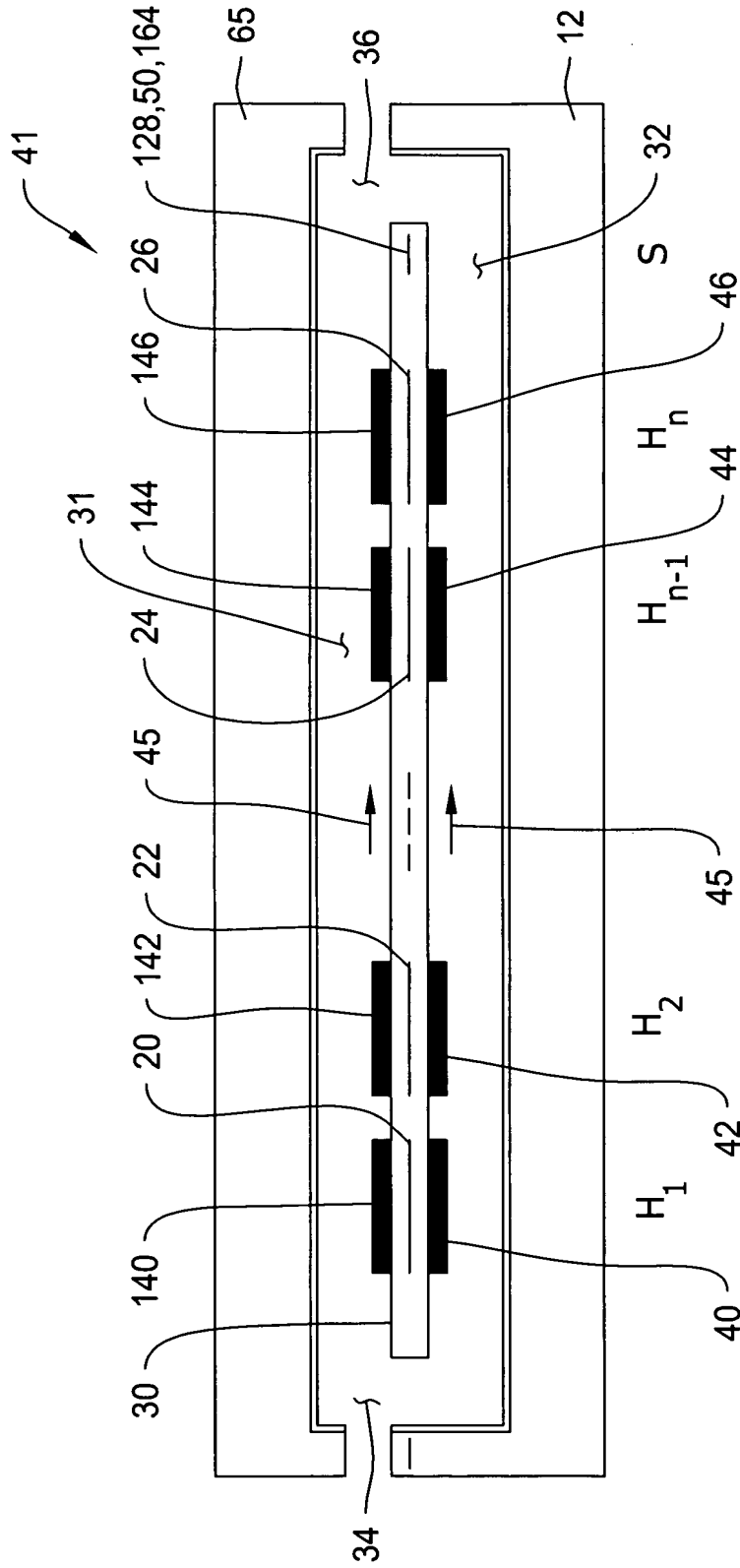


Figure 5

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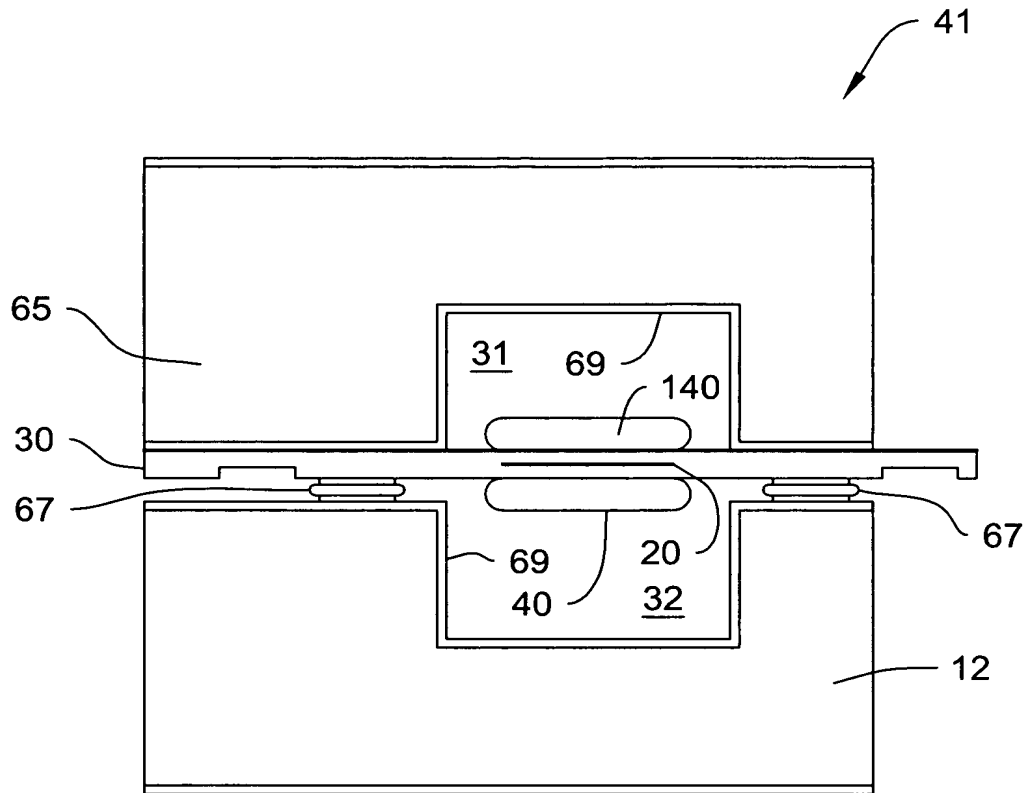


Figure 6A

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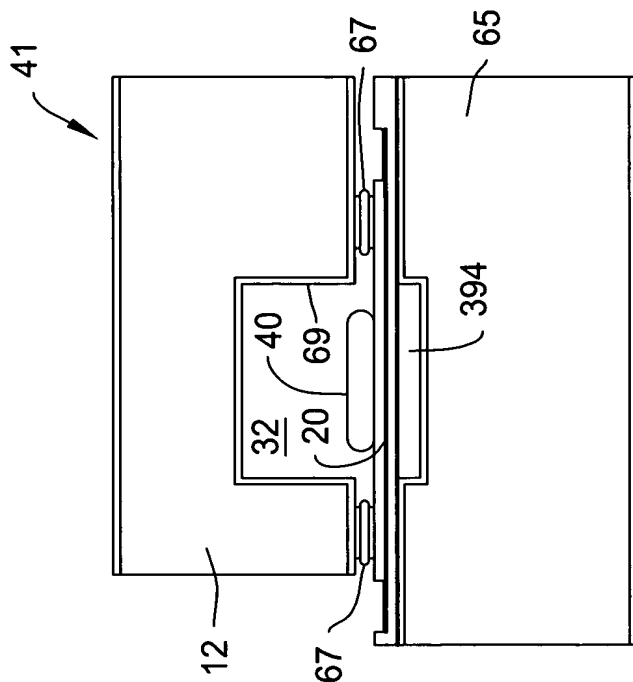


Figure 6C

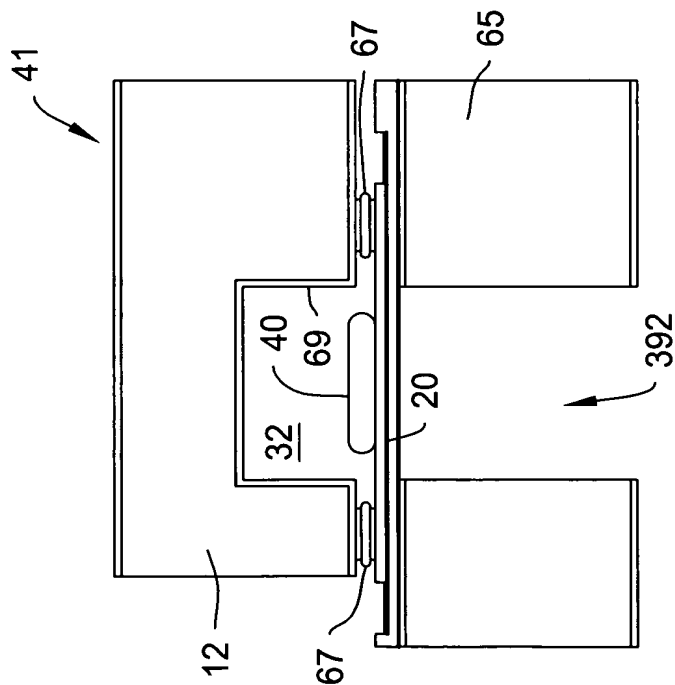


Figure 6B

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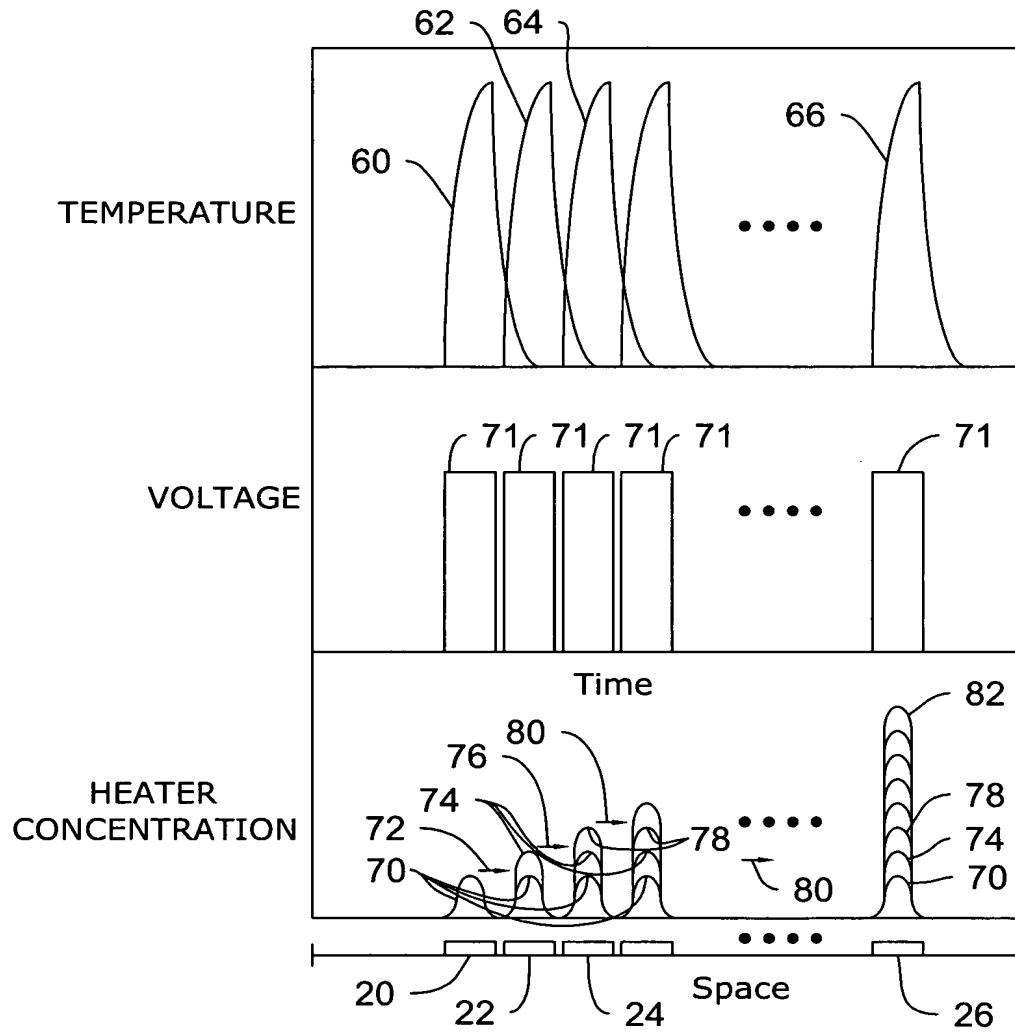


Figure 7

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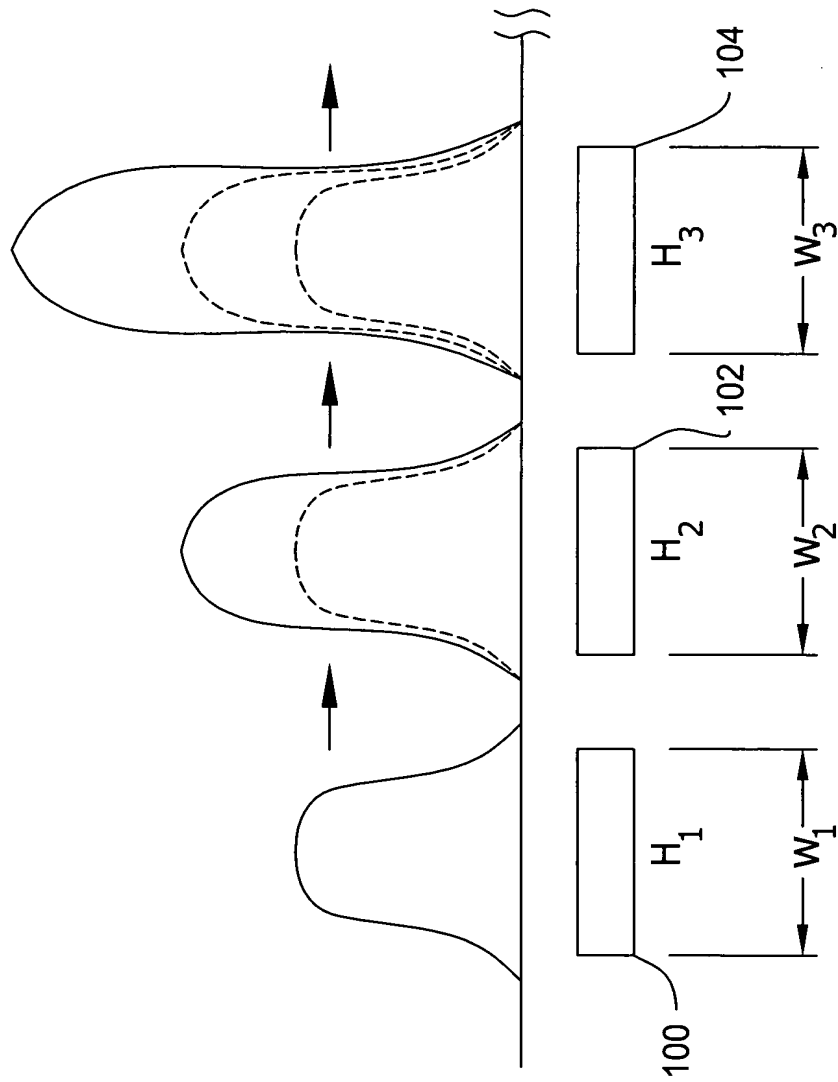


Figure 8

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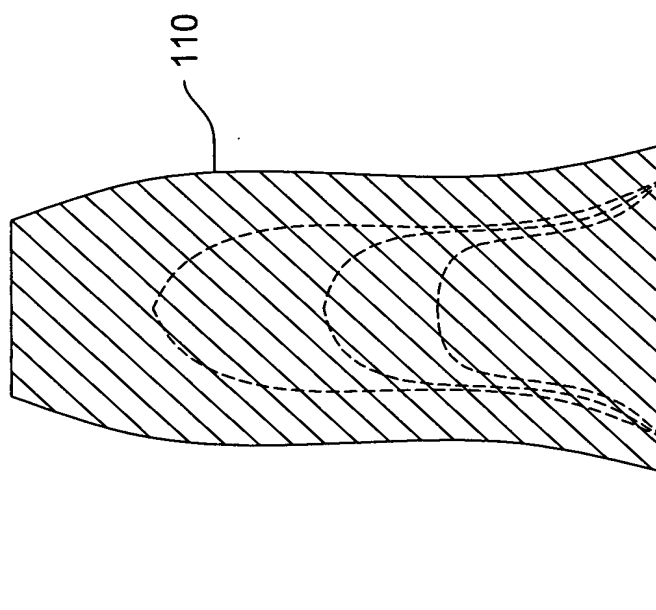


Figure 9

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Table III. Comparison of Detection Limits in pg/s (MDL) and Selectivities $\times 10^3$ (SEL)

element	wavelength, nm	this work		ref 9 (without background correction)		ref 9 (with background correction)		ref 7 ^a (echelle)		ref 8 ^b (with background correction)	
		MDL	SEL	MDL	SEL	MDL	SEL	MDL	SEL	MDL	SEL
N	174.2	7.0	6								
S	180.7	1.7	150								
Hg	184.9	0.1	3000								
C	193.1	0.5									
P	177.5	1.5	25								
C	247.9	2.6									
	251.6	7.0	90	2.7	1.6						
	253.6			9.3	11			58	3.9		
	253.7	0.1	5000	3.3				4.2	26		
Hg	470.4			0.6	77			2.0	91		
Br	478.6	75	19	33	0.27	67	1.0	20	1.4	38	0.53
Br	479.5	39	25	34	0.60	86	1.5			32	1.0
Cl	481.0			43	0.61			32	2.4		
H	486.1	2.2		16							
S	545.4	7.2	26	33	0.08	52	4.6	126	0.25	234	0.07
D	656.1	2.5	0.6 ^c	7.4	0.19						
H	656.3	3.0		7.5							
F	685.6	40	30	20	0.57	180	11.4	17	3.5	37	
O	777.2	75	25							11	0.82

^aReference 7 uses peak width at base instead of peak width at half height to determine MDL, and the numbers have been adjusted accordingly for comparison. ^bReference 8 uses 1σ instead of peak to peak (6σ) to measure noise for MDL, and their numbers have been adjusted accordingly for comparison. ^cVersus hydrogen.

Figure 10

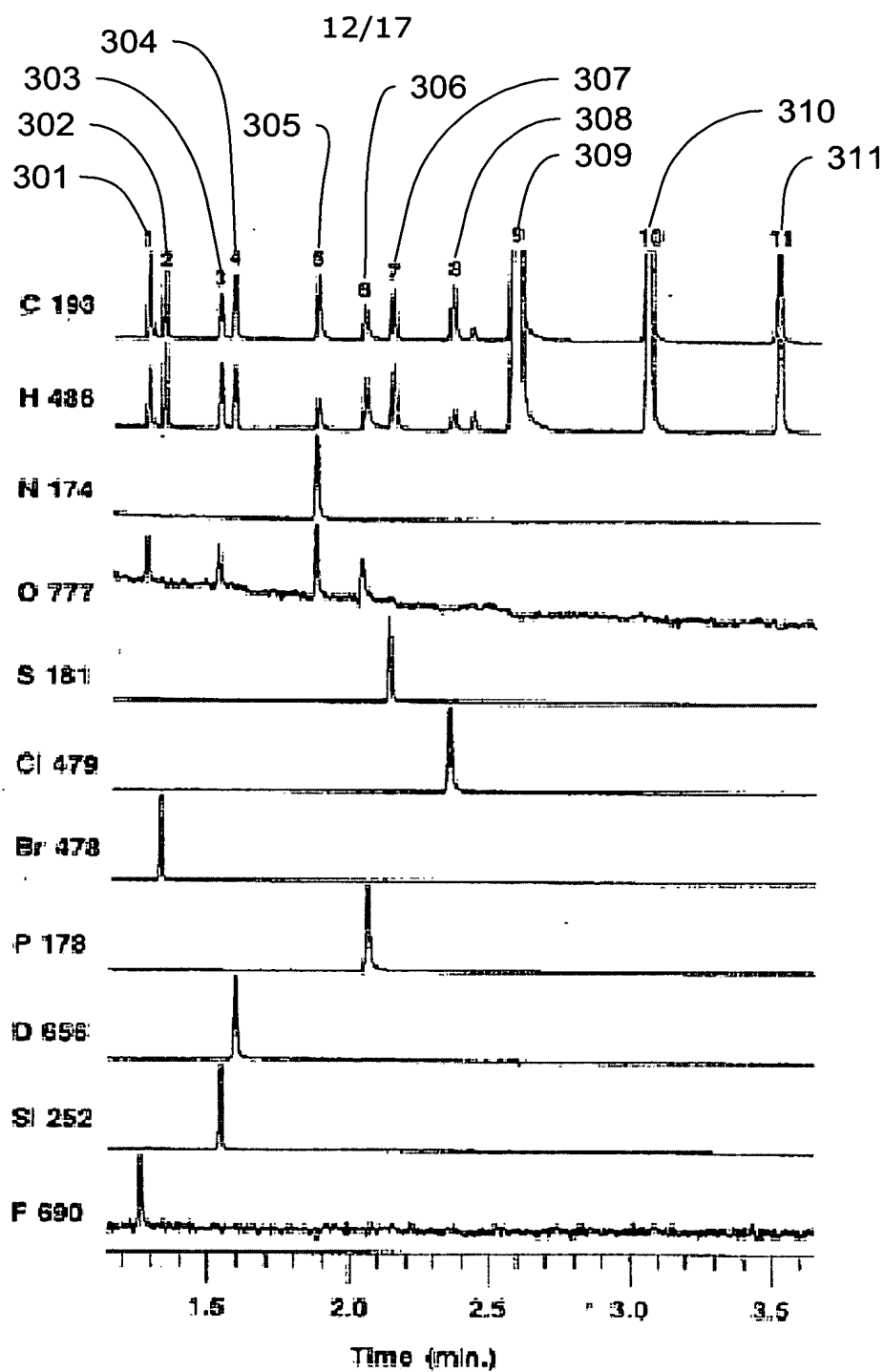


Figure 11

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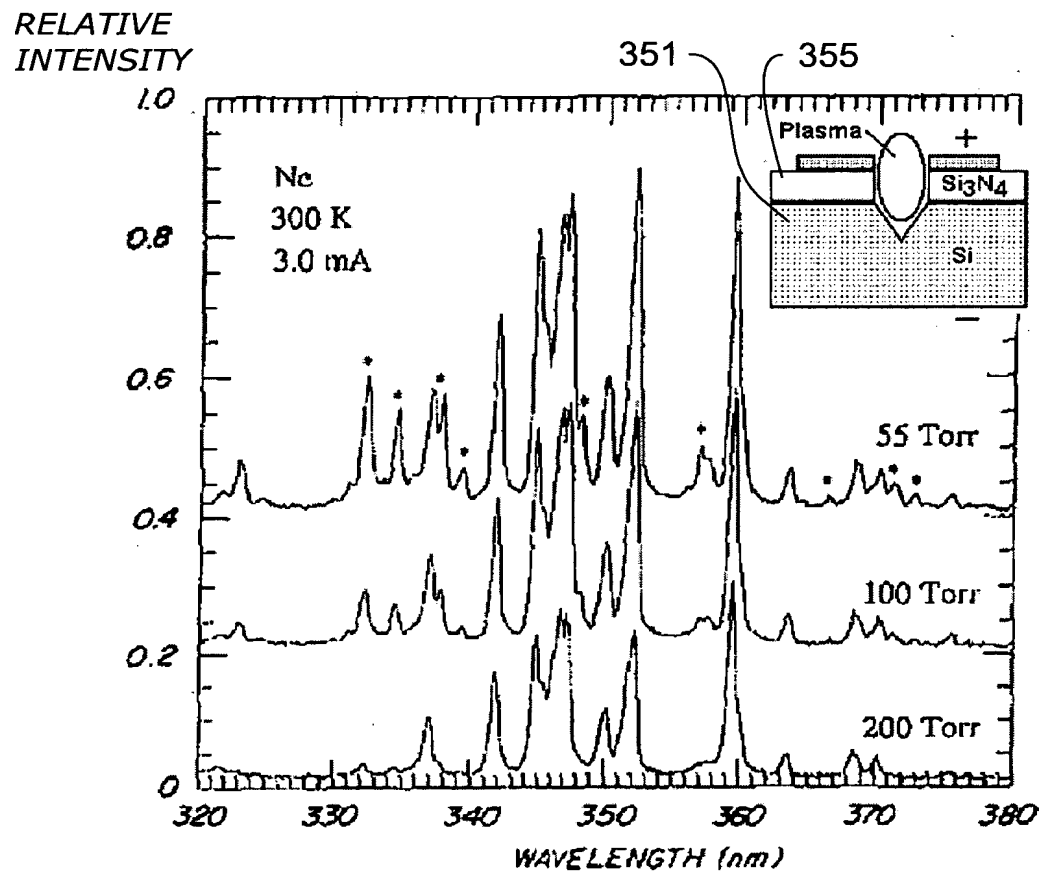
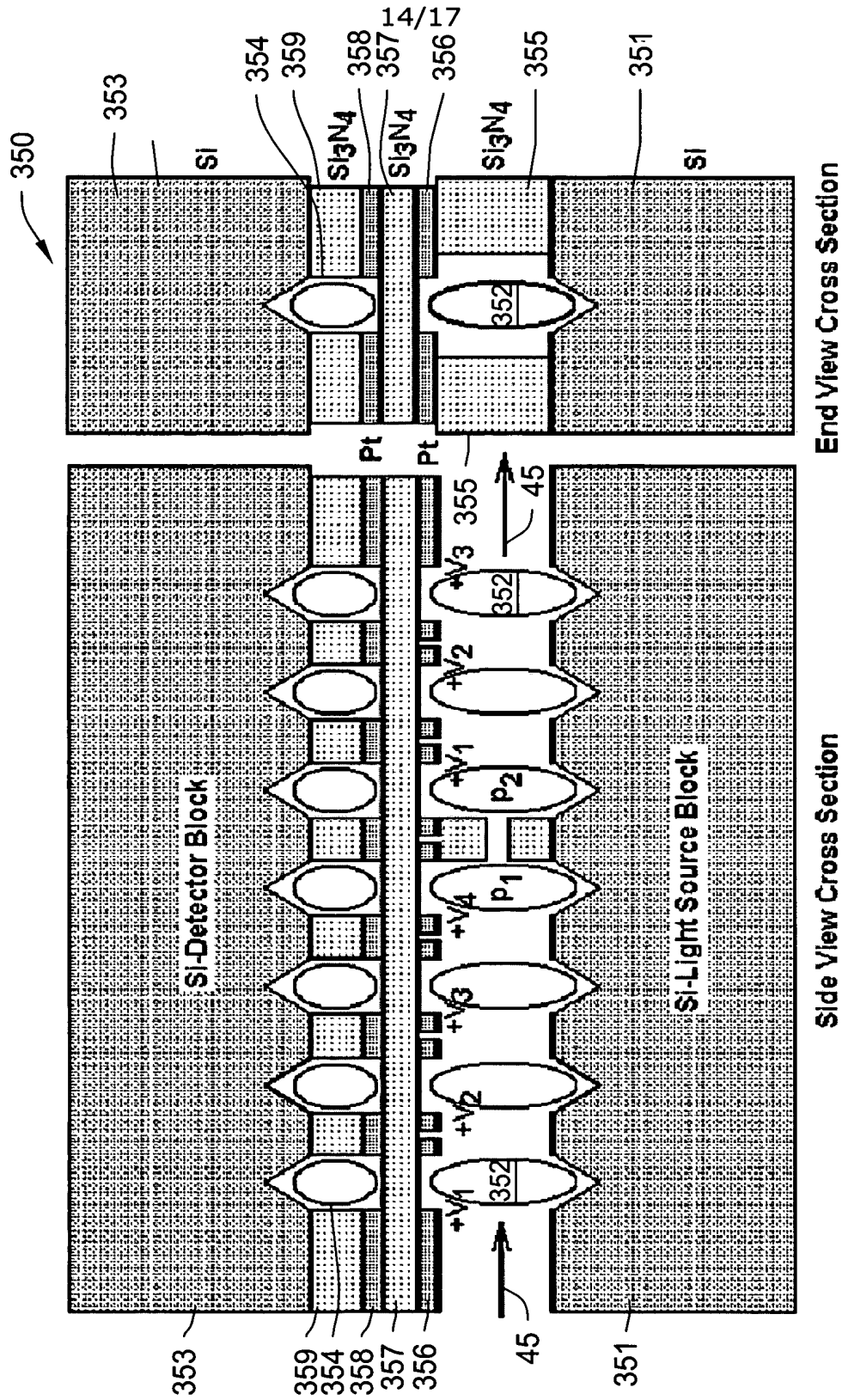


Figure 12



End View Cross Section

Side View Cross Section

Figure 13

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Photosensitivity
in A/W

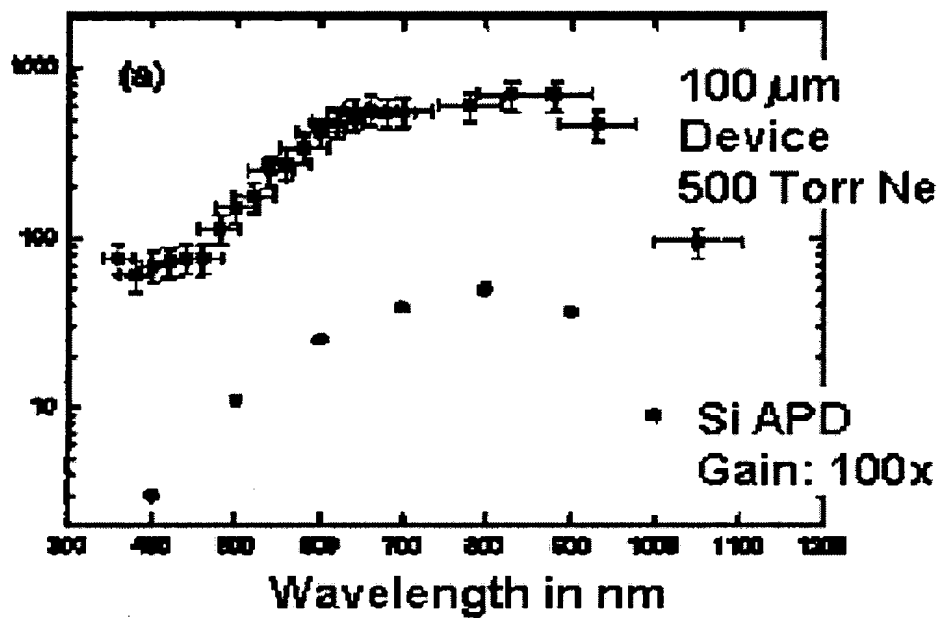
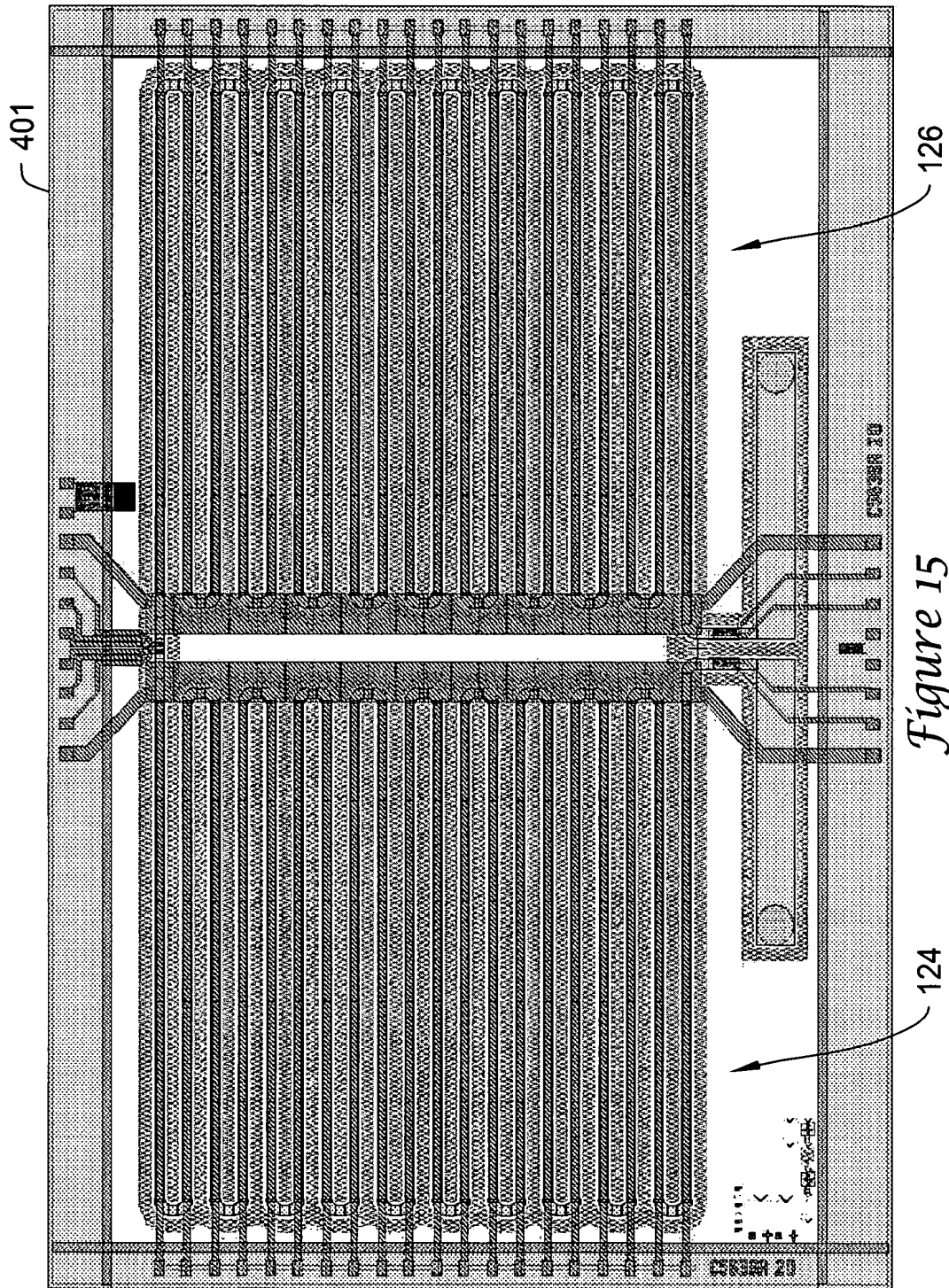


Figure 14

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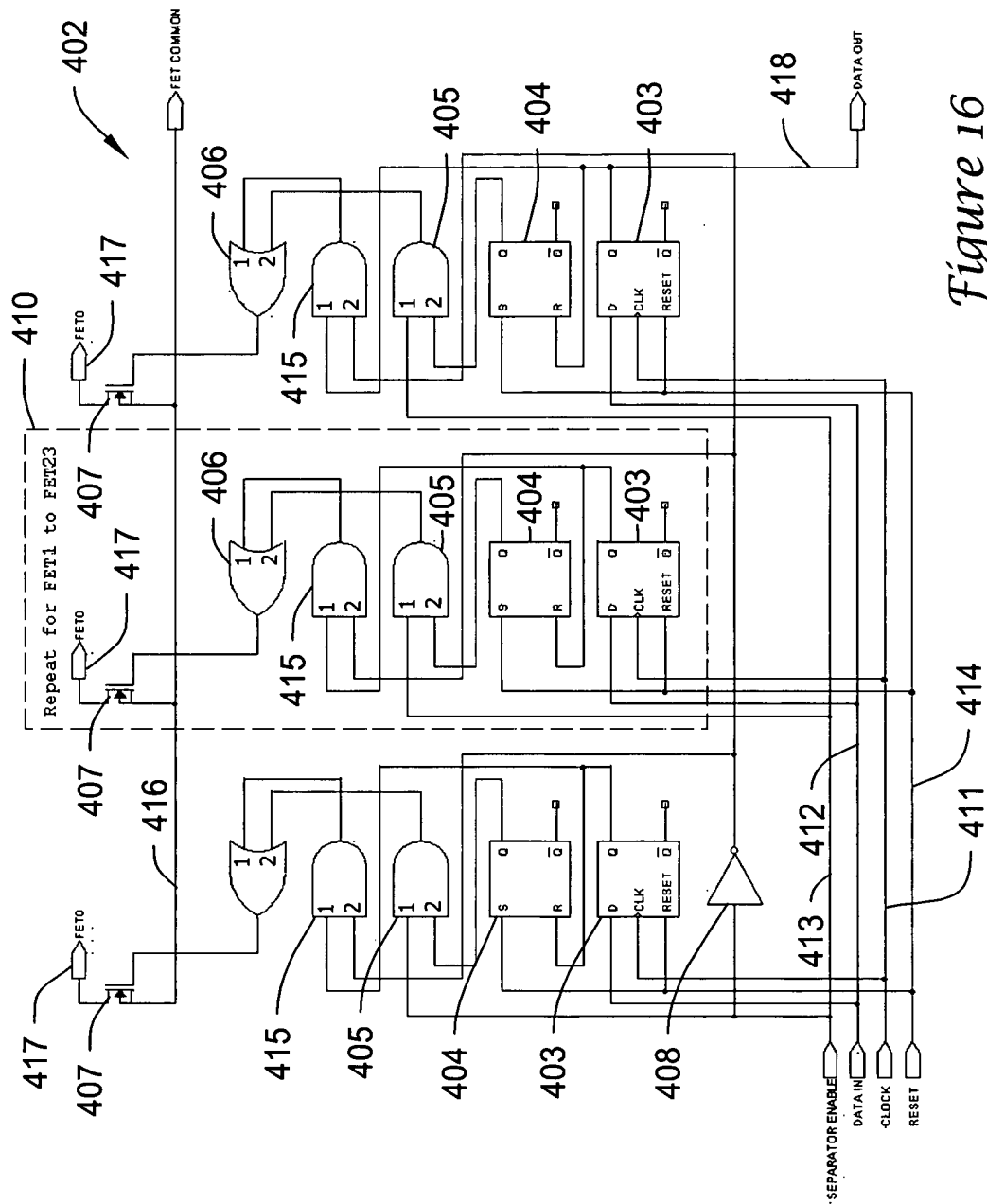


Figure 16